The BandLuxe C33X Series

User Manual

PN: 65005400011 (Rev.B)

BandLuxe

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The BandLuxe C33X Series

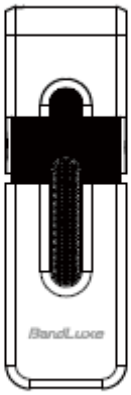
Chapter 1

Getting Started

Chapter 1 Getting Started

What's content

BandLuxe C33X USB dongle modem



Features

- **Support 2G, 3G, 3.5G and HSPA+ standard (HSDPA / WCDMA / EDGE / GPRS)**
- **Support SMS Message**
- **USB Interface**
- **Support microSD/microSDHC storage**
- **Support systems: Windows 7, Vista, XP**
- **Does not interfere with other USB peripherals**
- **Multi language interface (English, French, German, Italian, Spanish, Traditional Chinese, Russian, Portuguese and Finnish)**
- **Plug & Play**

Before You Install

Information

Before installing the C33X, we recommend obtaining the following information from the SIM Card Mobile network operator:

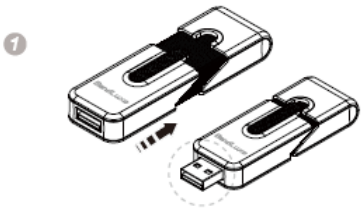
Access Point Name (APN)
- For many carriers, the APN may simply be *Internet*.

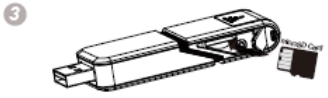
Phone Number
- The Phone Number to dial to establish a network connection. BandLuxe software helps input this number correctly.

Password (Optional)
- Some (but not many) carriers require a password.

Notice: BandLuxe C33X is a radio device. Please be aware to keep metal materials away from the device.

Insert the SIM Card & microSD Memory Card





1. USB connector can be extended by clicking the USB modem (fig. 1)
2. Remove the back cover to insert the SIM card. (fig. 2)
3. microSD card reader is equipped. Follow the arrow direction to insert the microSD card. (fig. 3)

*micro SD card is an optional purchased accessory.

Hardware Installation

With the SIM card properly inserted, the C33X may now be installed into the computer via USB port.

1. Insert the C33X into the computer.
2. The LED should light up when connection is established, though it may be obscured.

Chapter 1 Getting Started

Software Installation

The process and appearance of certain software elements in Windows Vista will be somewhat different than in XP. These differences are minor and should not limit the functionality of the C33X in any way.

New Hardware Detection

Windows XP

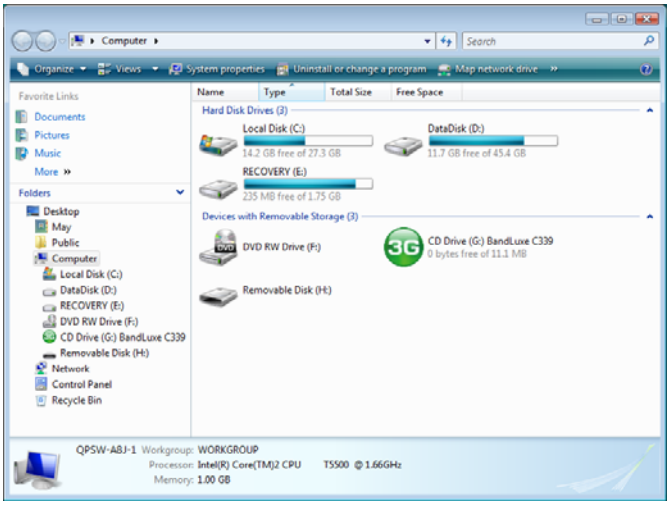
Once the C33X is connected, a dialog box should pop up from the Toolbar Hardware Connection Icon. The device will be identified as the BandLuxe 3.5G HSPA Adapter.

Windows Vista/ Win 7

In Vista / Win 7, a pop-up window may appear. Click **Allow** to proceed.

After the first pop-up, all other aspects for software installation will be identical in all compatible versions of Windows.

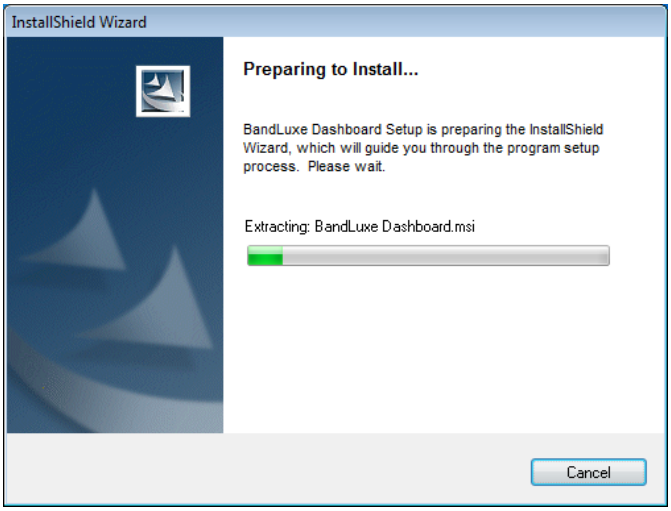
Software installation should proceed automatically. If it does not, it may be initiated from *My Computer*, where the C33X will be identified as a CD-ROM device. Sometimes a restart will occur during installation. If it does, reinitiate installation from *My Computer*.



Install Shield Wizard

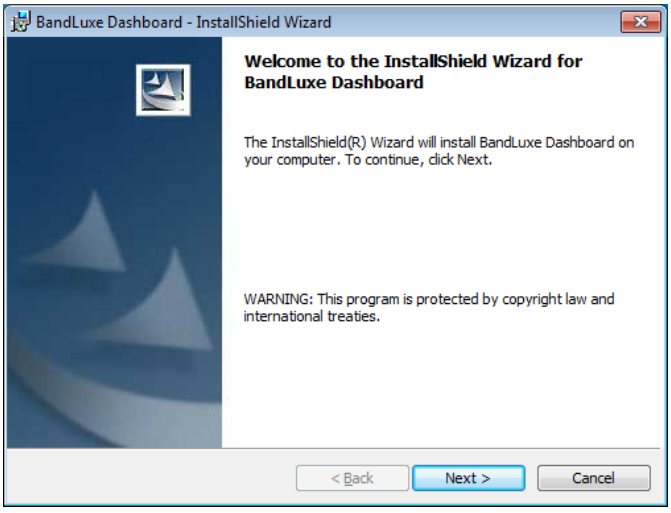
Setup Language

Preparation


InstallShield Wizard
Preparing to Install...
BandLuxe Dashboard Setup is preparing the InstallShield Wizard, which will guide you through the program setup process. Please wait.
Extracting: BandLuxe Dashboard.msi
Cancel

The C33X will automatically use the appropriate language for your OS, if available.

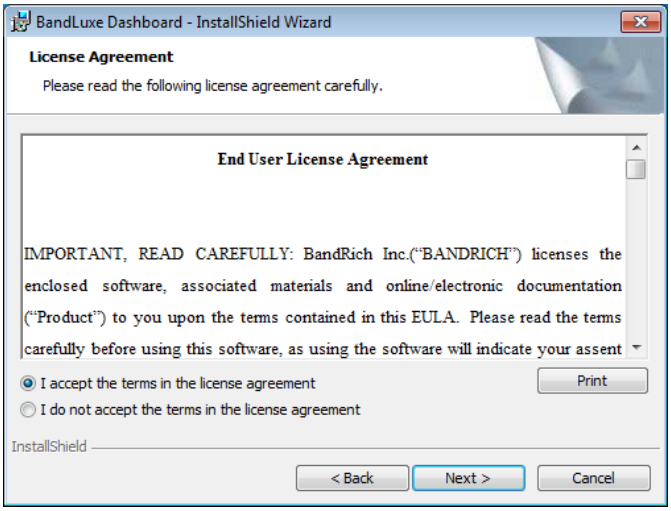
Welcome


BandLuxe Dashboard - InstallShield Wizard
Welcome to the InstallShield Wizard for BandLuxe Dashboard
The InstallShield(R) Wizard will install BandLuxe Dashboard on your computer. To continue, click Next.
WARNING: This program is protected by copyright law and international treaties.
< Back
Next >
Cancel

The Setup Wizard window opens automatically. The first page contains OS compatibility and legal disclaimers. Click **Next** to continue.

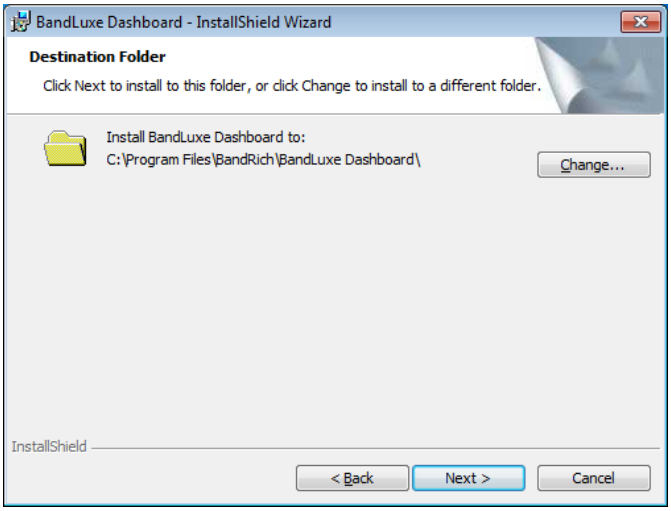
Chapter 1 Getting Started

License Agreement


BandLuxe Dashboard - InstallShield Wizard
License Agreement
Please read the following license agreement carefully.
End User License Agreement
IMPORTANT, READ CAREFULLY: BandRich Inc.("BANDRICH") licenses the enclosed software, associated materials and online/electronic documentation ("Product") to you upon the terms contained in this EULA. Please read the terms carefully before using this software, as using the software will indicate your assent
I accept the terms in the license agreement
I do not accept the terms in the license agreement
Print
InstallShield
< Back
Next >
Cancel

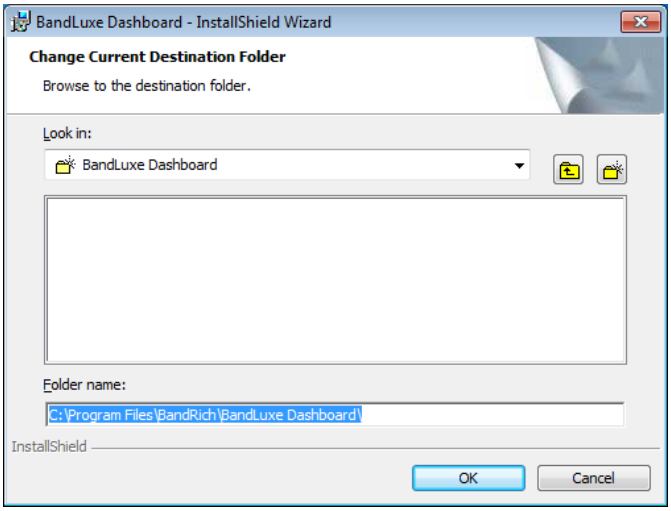
Click **I accept the terms in the license agreement** > **Next** to continue.

Select Installation Folder


BandLuxe Dashboard - InstallShield Wizard
Destination Folder
Click Next to install to this folder, or click Change to install to a different folder.
Install BandLuxe Dashboard to:
C:\Program Files\BandRich\BandLuxe Dashboard\
Change...
InstallShield
< Back
Next >
Cancel

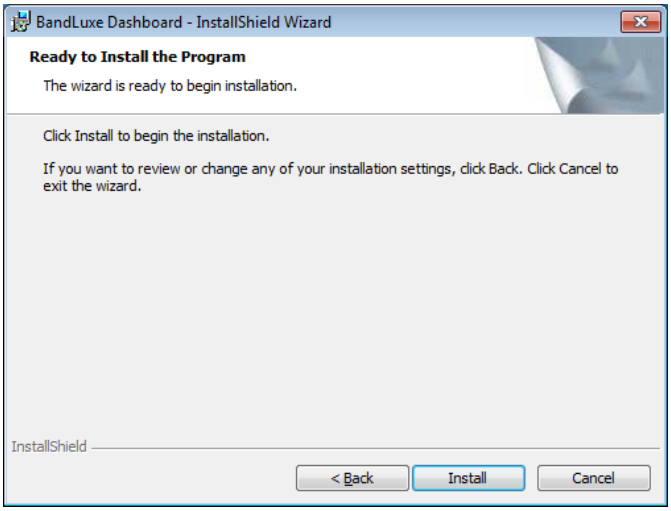
Click **Change** to manually select a folder.

Change Current Destination Folder



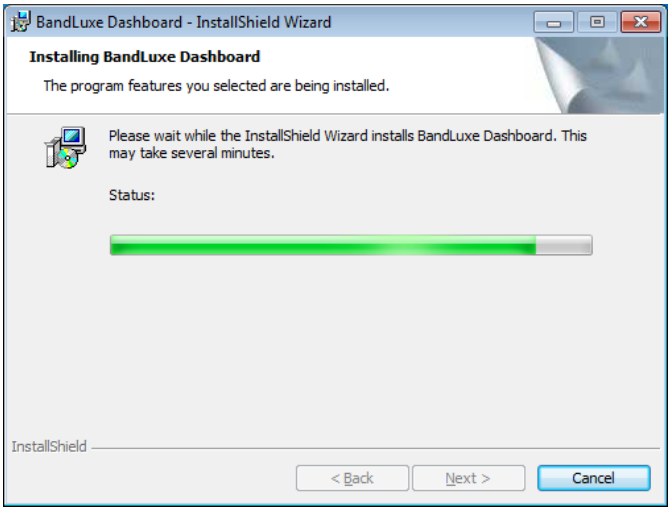
Highlight the folder and click **OK** to select it. Click **Cancel** to close the *Browse* window.

Confirm Installation


BandLuxe Dashboard - InstallShield Wizard
Ready to Install the Program
The wizard is ready to begin installation.
Click Install to begin the installation.
If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.
InstallShield
< Back
Install
Cancel

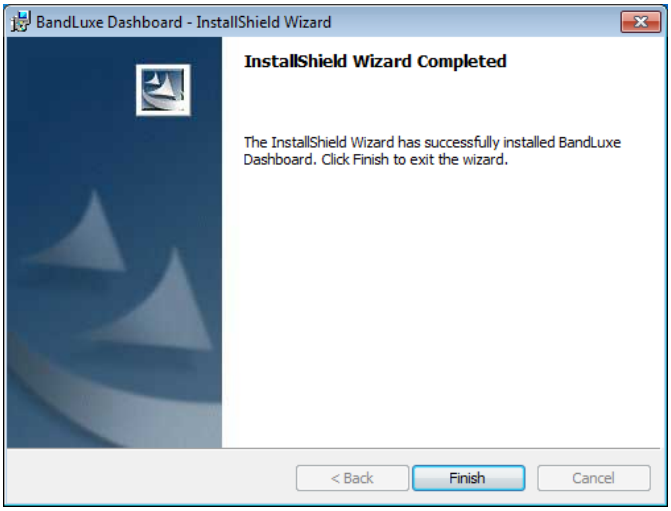
Click **Back** to change any preceding information or settings. Click **Install** to begin installation.

Installation


BandLuxe Dashboard - InstallShield Wizard
Installing BandLuxe Dashboard
The program features you selected are being installed.
Please wait while the InstallShield Wizard installs BandLuxe Dashboard. This may take several minutes.
Status:
InstallShield
< Back
Next >
Cancel

Installation time will depend on variable computer.

Installation Complete


BandLuxe Dashboard - InstallShield Wizard
InstallShield Wizard Completed
The InstallShield Wizard has successfully installed BandLuxe Dashboard. Click Finish to exit the wizard.
< Back
Finish
Cancel

When installation is completed, click **Finish** to exit. The Connection Manager will open automatically.

Chapter 1 Getting Started

Home Screen

1. Signal Strength
2. Minimize
3. Radio Technology
4. Mobile Network Operator
5. Connection Status
6. Connection Time Elapse
7. Total Data Uploaded
8. Total Data Downloaded
9. Menu
10. Home Screen
11. Connect/Disconnect
12. Close

Note: The Home screen only indicates 3G (internet) connection status. After installation, the C33X automatically initiates 2G (SMS) functions upon successful connection to the computer. Text messages can be sent or received, even if the Home screen indicates no connection.

Menu Screen

SMS: Text message folders such as Inbox, Draft, etc.

Setting: General, SMS, SIM, Radio and Network preferences.

Statistics: Upload/Download graphs, totals and connection log.

Contacts: C33X SIM Card and Outlook Contact lists.

Profile: Connection profile setup/options.

Information: Device, Version.

The BandLuxe C33X Series

Chapter 2

Connecting

Chapter 2 Connecting

Establishing a Connection

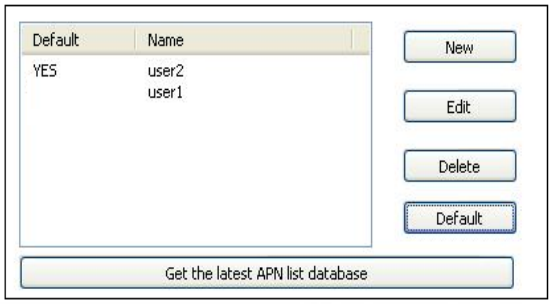
With the C33X installed, an online connection can be ready to use. The C33X will automatically scan your system and create a default profile, which should work in the vast majority of cases. To test it, simply click the Connect button.

Connection should take about 5 seconds. When established, the Home screen should show Connected, with the onscreen clock running and the Download/Upload tallies running. The toolbar icon will also change color to indicate the connection protocol (same as LED indicator). See Specifications for details.

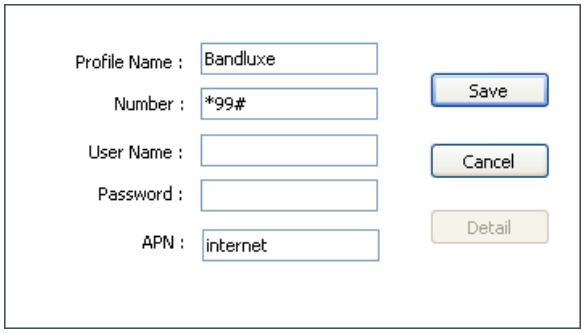
If connection is unsuccessful, check if the device and SIM card are properly connected and inserted. If they are, a new internet profile may need to be created.

Create a Profile

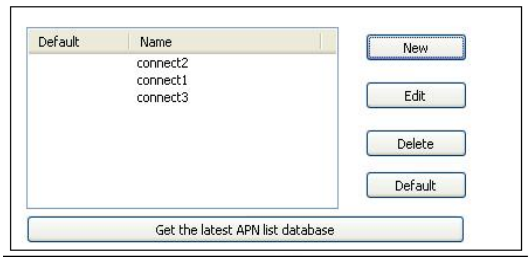
1. Click **Menu > Profile**. The profile menu will contain the default profile, showing *the operator's name of the SIM card*.



2. Click **New** to create a new profile. Depending on the carrier, all 5 spaces may not need to be filled to proceed.



3. Choose a *Profile Name*. The name is arbitrary and is helpful when different connection methods are available.
4. Inquire with the Mobile network operator (SIM carrier) as to whether the *User Name* and *Password* are required.
5. The *Password* can be any combination of letters, numbers or symbols and is case sensitive.
6. Enter the Access Point Name (*APN*) supplied by the SIM card carrier.
7. Enter the phone number for establishing the wireless connection, supplied by the SIM card carrier; click **Save**.



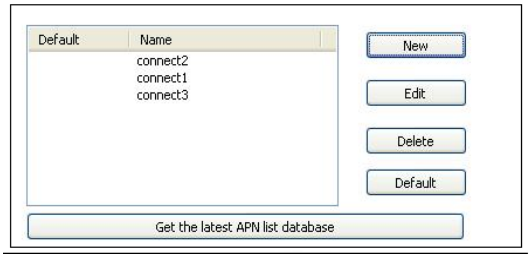
8. On the *Profile* window, click the newly created profile and then click **Default**. Click **OK** to set this profile as the default (only the default can be connected).
9. The BandLuxe C33X is now ready for a wireless connection. Click the **Connect** icon to establish. Connection should take about 5 seconds. When established, the Home screen should show **Connected**, with the onscreen clock running and the **Download/ Upload** tallies counting.

Note: If you switch to a different SIM card, the default profile will no longer be valid. You will have to create a new profile in the manner just described. If you can not access to all the information necessary to create a new profile, just uninstall and reinstall the BandLuxe software. The new default profile should work for the new SIM card

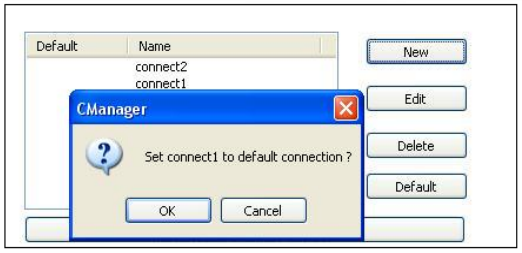
Choose a Profile

Different profiles may be needed, depending on changeable location.

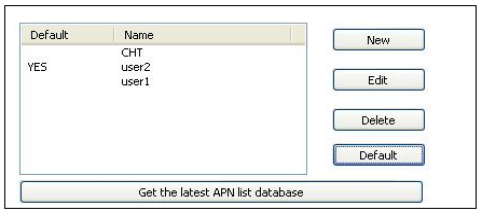
1. Click **Menu** > **Profile**.



2. Highlight the desired profile and click **Default**.



3. Click **OK** on the confirmation window if this is the desired profile.

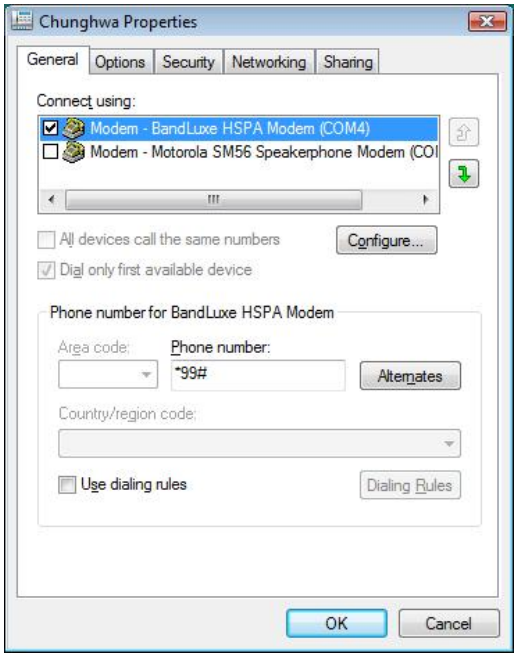


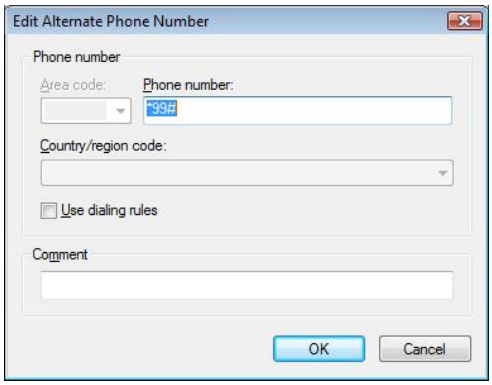
4. The word **YES** will appear next to the default profile.

Chapter 2 Connecting

Profile Properties

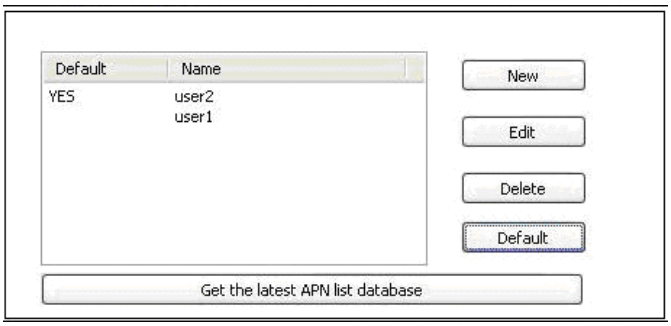
In the *Profile* window, click **Edit** to adjust the default profile. To adjust a non-default profile, highlight it and then click **Edit**. Click **Detail** on the *Edit* window to view the *Properties* menu, *General* Tab.





Get the latest APN List Database

The **Profile** provides the APN List Update function. When the network connection is established, the APN List will be updated after clicking this button.



General

Connect using

If other modems are available, they will be listed here. Click **Configure** to adjust the BandLuxe modem settings.

Phone number

Check **Use dialing rules** to access the *Location Information* window to add more specific dialing information such as **tone/pulse dialing**, **current region**, **area & carrier code**, and **outside line access number**.

Click **OK** when completed.

This and other *Properties* menu tabs are generic to the Windows OS and will not be discussed further.

Connecting & Disconnecting

If a default profile has been selected, a connection can be made or ended at any time by clicking the Connect button on the *Menu* screen. However, connection status will not be obvious unless the Home screen is displayed. The *Statistics* or *Signal Information* windows also clearly display connection status.

The BandLuxe C33X Series

Chapter 3

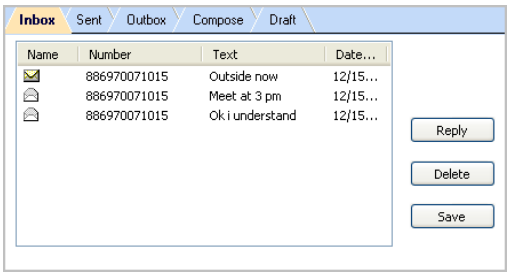
SMS

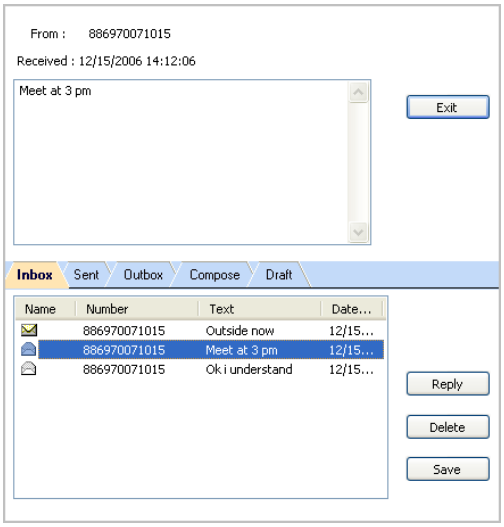
Chapter 3 SMS

The Connection Manager allows the standard SMS options as any other mobile devices. The related information, including Contact's name, number, body text and the stored date of each message in the *Inbox*, *Outbox*, *Sent* and *Draft* folders will be displayed..

Inbox

It contains received messages. Save, Delete or Reply to Inbox messages by highlighting them and pressing the appropriate button. Highlight a message to make it scroll open above. Unread messages are closed envelopes while read messages are opened.





Sent

It contains all successfully sent messages. Highlight a message and press **Delete** to erase it.

Outbox

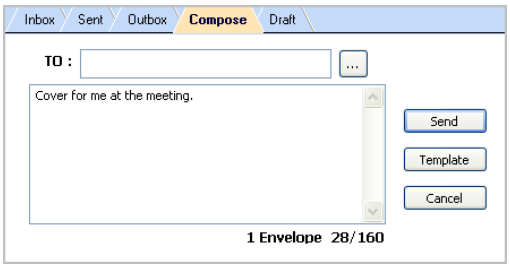
It contains completed but unsent messages. Send or Delete messages by highlighting them and pressing the appropriate button.

Compose

It contains all tools for creating messages.

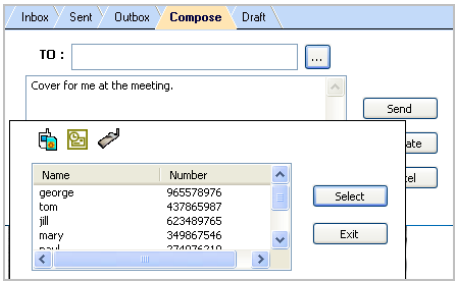
To: Contains the Phone Number of the recipient.

Message Body: Key in the content.



... Press to see contact lists.

- SIM Card Contacts
- Outlook Contacts
- C33X Contacts



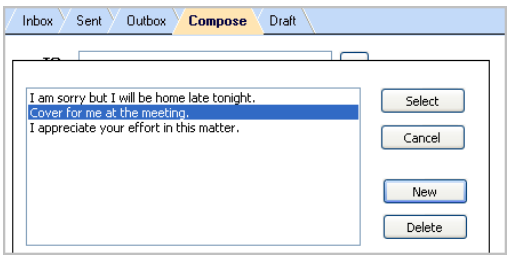
Highlight a Contact and click **Select** to choose it. Click **Exit** to return to the Compose screen.

Click **Template** to view all stored templates, or create/delete one.

Highlight a template and click Select to insert it into the message.

Click **New** to create a new template. Click **Save** to add the new template to the list of existing ones. Click **Cancel** to return to the Template list window.

Highlight a template and click **Delete** to erase it.



Draft

It contains saved but unfinished messages. Highlight a draft and click **Edit** to send the message back to the *Compose* window.

The BandLuxe C33X Series

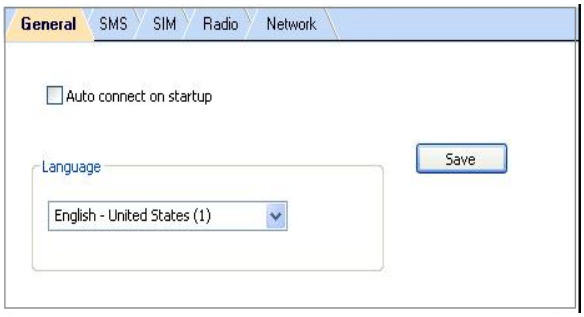
Chapter 4

Setting

Chapter 4 Setting

General

Check *Auto connect on startup* to have the C33X connect to the internet automatically during startup.



Language

The Connection Manager offers multi languages interface. To choose a language, click the menu to highlight and select a language. Click **Save** to implement the chosen language. The Connection Manager will then return to the Home Screen with the chosen language.

SMS

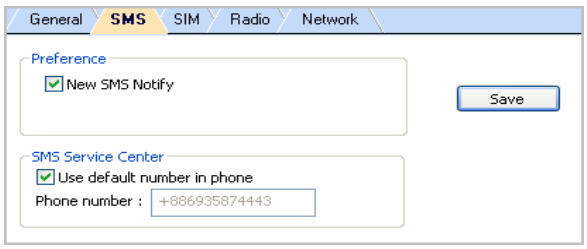
Preference

New SMS Notify: Check to be notified when a new text message arrives. If enabled, the Toolbar Connection Manager Icon will change to an Envelope Icon. An envelope icon will also appear in the upper left corner of the Home screen when a new message arrives.

SMS Service Center

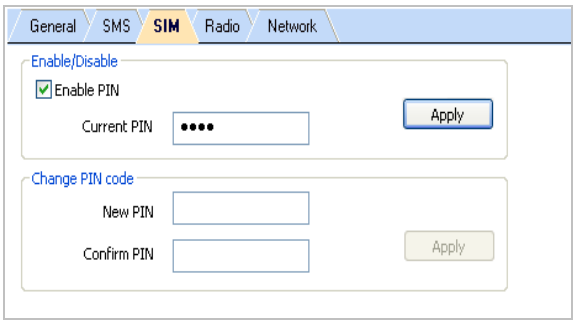
Use default number in phone: Uncheck to manually input service center number.

Click **Save** after making any changes.



SIM

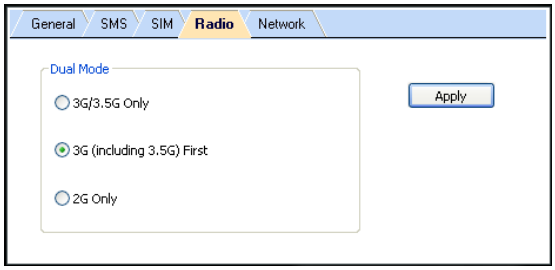
Enable/Disable or change the SIM card Personal Identification Number (PIN). Press **Apply** after making any changes. A SIM card must be inserted for this function to be activated.



If a PIN code is enabled, it will be asked during SIM card initialization. After 3 incorrect PIN code entries, the SIM card will be locked. Contact your operator to unlock it.

Radio

Dual Mode- Features various network search options. Note that *3G (including 3.5G) First* is the default setting.



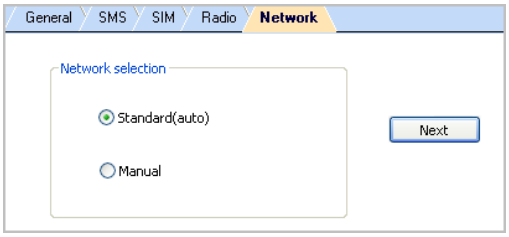
After making changes to either, click **Apply**.

Notice: 2G/3G/3.5G data transferring will be disconnected when you apply new "Radio" setting.

Network

Network Selection

Standard (auto) Search for networks in the order specified in the *Prefer* list. Click **Standard (auto)** > **Next** to view and adjust the *Prefer* list.

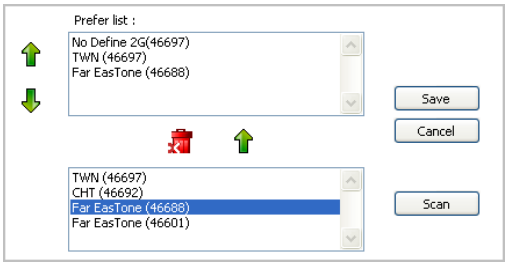


The top list is the *Prefer* list; the bottom lists all available networks. Click **Scan** to bring up the list of all available networks.

In the *Prefer* list, highlight a network and click the up arrow to the left to move it up the list (increase its preference); clicking the down arrow does the opposite. Clicking the red icon removes the highlighted network from the *Prefer* list.

In the bottom list, highlight a network and click the up arrow above to move that network to the *Prefer* list.

Chapter 4 Setting

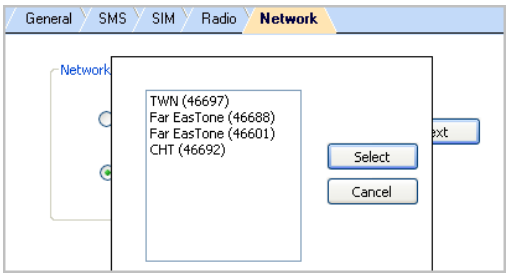


If changes are made, click **Save**.

Manual

Choose a network from all the available. Click **Manual** > **Next** to see the list. Highlight a network and click **Select**. If no change is needed, click **Cancel**.

Note that **Network** can only be accessed when the C33X is not connected to a network.



The BandLuxe C33X Series

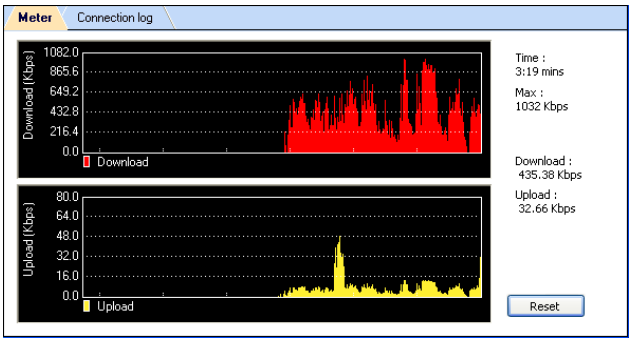
Chapter 5

Statistics & Information

Chapter 5 Statistics & Information

Statistics

The *Statistics* screen displays a graph of recent upload and download activities. If there is no data shown, the C33X is disconnected. Click **Menu** > **Statistics**.



Time: Elapsed Connection Time

- Returns to zero upon disconnection
- Reset does not affect it

Max: Maximum Throughput

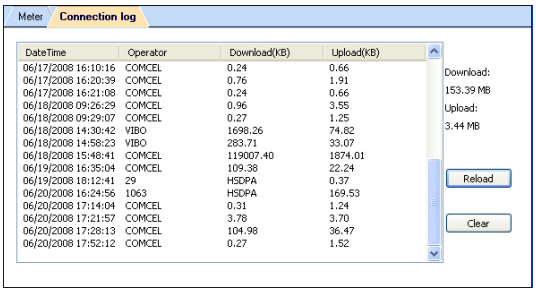
Download: Current Downloading Throughput

Upload: Current Uploading Throughput

Click **Reset** to end the current graphs and start over. This will not affect the actual connection.

Connection log

Click **Menu** > **Statistics** > **Connection log** to see data counting by each connection status and accumulated connection status



Each data counting

- ***DateTime***: The date and time of connection log
- ***Operator***: Telecom network operator
- ***Download(KB)***: Downloaded Throughput
- ***Upload(KB)***: Uploaded Throughput

Accumulated data counting

- ***Download***: Total Downloaded Throughput
- ***Upload***: Total Uploaded Throughput

Click **Reload** to reload the latest data information. Click **Clear** to clear all data counting information

*** The data counting here is only for reference, please check operator for real data throughput if any.**

Information

The *Information* screen offers version or signal specifications. Click **Menu** > **Information**.

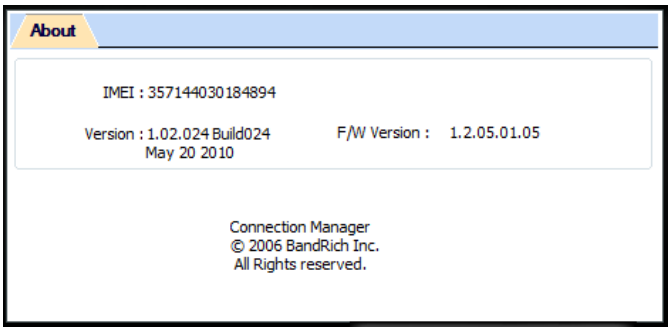
About

Click **Menu** > **Information** > ***About*** tab to see version data.

IMEI: International Mobile Equipment Identity number

Version: Connection Manager Software Version

F/W Version: Firmware Version



The BandLuxe C33X Series

Chapter 6

Q&A

Chapter 6 Q&A

Q: Why does the Home screen display *No Device*?

A: Make sure that the C33X is plugged in/inserted correctly. If it is, and *No Device* is still displayed, check the LED.

If the LED is not lit, the problem could be:

- The USB port is not activated. Check the *Device Manager*.

Q: The Home screen is stuck on *Initial SIM Card*, what should I do?

A: Replug/reconnect the C33X. If this does not work, restart the computer. If reconnection doesn't make the C33X activate, check the SIM card, which may have a poor connection or be locked.

Q: The SIM card is working, so why can't the C33X make a connection?

A: Check the profile information; click **Menu** > **Profile**. See *Chapter 2* for details.

If profile setting is in order, the radio or network setting may need adjustment. Click **Menu** > **Setting**. See *Chapter 4* for details. If *Radio* and *Network settings* are in order, please check the signal strength indicator in the upper left corner of the Connection Manager.

Q: How do I import contacts into the Connection Manager?

A: Click **Menu** > **Contacts** >

- Import from the SIM Card.
- Import from Outlook.
- Import from the C33X Contacts folder.

Q: What microSDHC™ card tested in the BandLuxe C33X?

A: BandLuxe C33X have microSDHC reader and support up to 16GB microSDHC cards. Due to the availability of microSDHC cards, we recommend SanDisk microSDHC cards.

Q: Can I prevent others from using my C33X?

A: Yes. Click **Menu** > **Setting** > **SIM** to enable or change the SIM card PIN code.

Q: Why do some SMS text symbols display incorrectly on the receiving phone?

A: This is related to the different decoding schemes used by various mobile phones. Known problem symbols include:
~ ! @ # $ % ^ & * ( ) _ + ` - = { } | : " < > ? [ ] \ ; ' , . /

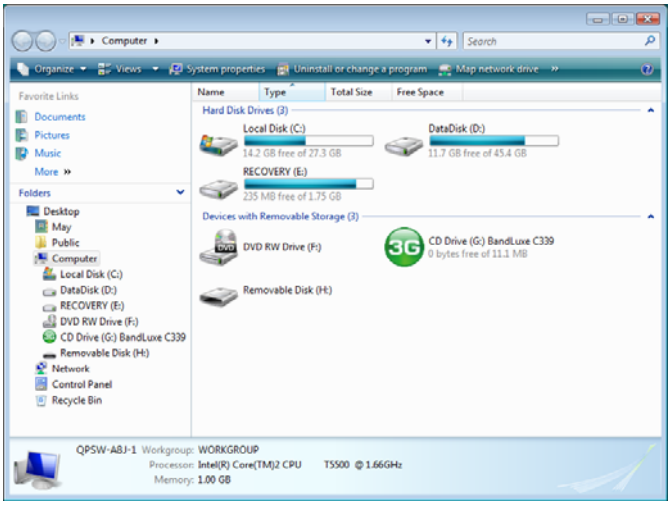
Q: The Install Shield Wizard does not automatically pop-up when I first plug in the C33X , what should I do?

A: In *My Computer*, right click on the drive with the Connection Manager icon and select AutoPlay. This should initiate the Install Shield Wizard.

BANDLUXE C33X (H:)

Q: My computer cannot boot with the C33X connected. Why?

A: As discussed in Chapter 1, during installation the C33X is displayed in *My Computer* as a portable storage device.



The computer treats the C33X as if it were a CD drive. Therefore, your computer may be trying to boot from it, as if it were expecting a Boot CD. Disconnect the C33X before booting.

Q: How do I view the .pdf Quick Start Guide and User Manual?

A: Click **Start** > **Programs** > **BandLuxe** > **BandLuxe Dashboard** and choose either document. Both files require Adobe Acrobat 6.0+.

The BandLuxe C33X Series

Chapter 7

Important Safety Information and Glossary

Chapter 7 Important Safety Information and Glossary

Safety Information

Important Notice

Due to the transmission and reception properties of cellular communications, data can occasionally be lost or delayed. This can be due to the variation in radio signal strength that results from changes in the characteristics of the radio transmission path.

Although data loss is rare, the environment where you operate the C33X may adversely affect communications. Variations in radio signal strength are referred to as fading. Fading is caused by several different factors including signal reflection, the ionosphere, and interference from other radio channels.

BandRich Inc. or its partners will not be held responsible for damages of any kind resulting from the delays or errors in data transmitted or received by the BandLuxe C33X or failure of the BandLuxe C33X to transmit or receive such data.

BandLuxe™ is a registered trademark of BandRich Inc.

Potential Hazards

Do not operate the BandLuxe C33X in an environment that may be susceptible to radio interference resulting in danger; specifically:

Areas where prohibited by the law.

- Follow any special rules and regulations and obey all signs and notices. Always turn off the host device and remove the C33X from the card slot when instructed to do so, or when you suspect that it may cause interference or danger.

Where explosive atmospheres may be present.

- Do not operate your C33X in any area where a potentially explosive atmosphere may exist. Sparks in such areas could cause an explosion or fire resulting in bodily injury or even death. Be aware and comply with all signs and instructions.
- Users are advised not to operate the C33X while at a refueling point or service station. Users are reminded to observe restrictions on the use of radio equipment in fuel depots (fuel storage and distribution areas), chemical plants or where blasting operations are in progress.
- Areas with a potentially explosive atmosphere are often but not always clearly marked. Potential locations can include gas stations, below deck on boats, chemical transfer or storage facilities, vehicles using liquefied petroleum gas (such as propane or butane), areas where the air contains chemicals or particles, such as grain, dust or metal powders, and any other area where you would normally be advised to turn off your vehicle engine.

Near Medical and life support equipment.

- Do not operate your C33X in any area where medical equipment, life support equipment, or near any equipment that may be susceptible to any form of radio interference. In such areas, the host communications device must be turned off. The C33X may transmit signals that could interfere with this equipment.

On an aircraft, either on the ground or airborne.

- In addition to FAA requirements, many airline regulations state that you must suspend wireless operations before boarding an airplane. Please ensure that the host device is turned off and your C33X is removed from the card slot prior to boarding aircraft in order to comply with these regulations. The C33X can transmit signals that could interfere with various onboard systems and controls.

While operating a vehicle.

- The driver or mobile network operator of any vehicle should not operate a wireless data device while in control of a vehicle. Doing so will detract from the driver or mobile network operator's control and operation of that vehicle. In some countries, operating such communications devices while in control of a vehicle is an offense.

Regulations

CE Marking

This device has been tested to and conforms to the regulatory requirements of the European Union and has attained CE Marking. The CE Mark is a conformity marking consisting of the letters "CE". The CE Mark applies to products regulated by certain European health, safety and environmental protection legislation. The CE Mark is obligatory for products it applies to: the manufacturer affixes the marking in order to be allowed to sell his product in the European market.

This product conforms to the essential requirements of the R&TTE directive 1999/5/EC in order to attain CE Marking. A notified body has determined that this device has properly demonstrated that the requirements of the directive have been met and has issued a favorable certificate of expert opinion. As such the device will bear the notified body number 0678 after the CE mark.

The CE Marking is not a quality mark. Foremost, it refers to the safety rather than to the quality of a product. Secondly, CE Marking is mandatory for the product it applies to, whereas most quality markings are voluntary.

Marking: The product shall bear the CE mark, the notified body number(s) as depicted to the right. CE 0560.

15.21 Federal Communications Commission (FCC) Statement

You are cautioned that changes or modifications not expressly approved by the part responsible for compliance could void the user's authority to operate the equipment.

15.105(b) Federal Communications Commission (FCC) Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

Operation is subject to the following two conditions:

1) this device may not cause interference and
2) this device must accept any interference, including interference that may cause undesired operation of the device.

Chapter 7 Important Safety Information and Glossary

FCC RF Radiation Exposure Statement:

1. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
2. This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 0.4 centimeters between the radiator and your body

SAR compliance has been established in a laptop computer with side USB port configuration as tested in this filing, and can be used in laptop computers with substantially similar physical dimensions, construction, and electrical and RF characteristics. Compliance of this device in all final host configurations is the responsibility of the Grantee. End-users must be provided with specific information required to satisfy RF exposure compliance for all final host devices.

Max. SAR levels: 0.866 mW/g (1g) in avoid of radio interference, please do not use this device close to another transmitters.

Specifications

System Requirements

Operating System: Windows 7, Windows Vista, Windows XP SP2+, Mac OS X 10.4.x, 10.5.x, 10.6.x

Web Browser: Internet Explorer 6.0+

LED Indicators

Color	Indicator	Flashing	Solid
Off	Not Connected	NA	NA
Red	SIM Card/Service	No coverage/ still searching	Error (SIM card missing, failed verification) / PIN code enable
Green	WCDMA	Available	Connected
Blue	HSDPA/HSUPA/HSPA+	NA	Connected
Pink/Purple	GPRS/EDGE	Available	Connected

Hardware

Dimensions: 80 x 25 x 12 mm Typical (USB dongle)

Weight: 25g

Onboard Memory: 512 MB NAND Flash

GSM Bands: 850, 900, 1800, 1900

UMTS Bands:

	C330	C331	C339
UMTS Band	850/1900/2100	2100	900/2100

Environment

Operation Temperature	0°C to 55°C (32°F to 131°F)
Storage Temperature	-20°C to 65°C (-4°F to 149°F)

Connectivity

Internet: NDIS

Data Speed in bps: Downlink: 21 Mbps (Max)
Uplink: 5.76 Mbps

IP Settings: APN, DNS, DHCP vs. Static, Radius

Glossary

2G: Second-generation mobile networking technology. Represents a switchover from analog to digital; most 2G networks use GSM.

3G: Third-generation mobile networking technology that enables simultaneous transfer of voice and non-voice data; most 3G networks use WCDMA.

3.5G/ HSPA: A more recent standard of mobile networking technology; generally uses HSDPA and HSUPA

APN (Access Point Name/Network): Provides GPRS routing information. Consists of:

Network ID: Identifies the external service requested by a GPRS user.

Mobile network operator ID: Specifies routing information.

ARFCN (Absolute Radio Frequency Channel Number): The specific ID numbers for all radio channels used in cellular mobile communications.

bps (bits per second): How data flow is measured.

DNS (Domain Name System): Helps route network traffic by making the addressing process more user-friendly.

DHCP (Dynamic Host Configuration Protocol): How devices obtain IP addresses from a server.

EDGE (Enhanced Data GSM Environment/Enhanced Data for Global Evolution): Advanced GPRS that delivers multimedia and other data needing greater bandwidth at up to 237 kbps.

GPRS (General Packet Radio Service): Delivers data in packets at up to 86 kbps.

GSM (Global System for Mobile Communications): The most popular cellular network, mostly operates in 850-900 or 1800-1900 MHz; the primary 2G system.

IMEI (International Mobile Equipment Identity): A number unique to each GSM/UMTS device that can be used block network access by a stolen mobile device.

IP (Internet Protocol): Routes packets over a network.

HSDPA (High Speed Downlink Packet Access): Advanced WCDMA that delivers downlink bandwidth intensive data at up to 7.2Mbps; typically associated with 3.5G.

HSUPA (High Speed Uplink Packet Access): Advanced WCDMA that delivers uplink bandwidth intensive data at up to 5.76Mbps; typically associated with 3.75G.

HSPA+ (High Speed Packet Access evolution): Advanced HSPA that delivers uplink bandwidth intensive data over 14.4 Mbps..

Kbps (Kilobits per second): A data flow measure; 1024 bits/second.

LAN (Local Area Network): A data network with limited range but good bandwidth.

Mbps (Megabits per second): A data flow measure; 1,048,576 bits/second.

NDIS (Network Driver Interface Specification): a Windows device driver interface that enables a single network interface card to support multiple network protocols.

PPP (Point-to-Point Protocol): An internet connection method.

PIN (Personal Identity Number): Four to eight digital numbers SIM card security code; allows access to the carrier's network.

Rx: Shorthand for *Reception*.

SIM (Subscriber Identity Module): A small card that contains key mobile device identification, subscription and contact information.

SMS (Short Messaging Service): Allows text messages of up to 160 characters.

Tx: Shorthand for *Transmission*.

UMTS: Universal Mobile Telecommunications System is one of the **third-generation (3G)** cell phone technologies

WCDMA (Wideband Code Division Multiple Access): Advanced EDGE that supports 384kbps data flow. Most 3G networks use this standard; aka UMTS.